

Soils Report

Corrosion Concrete - Dominant Condition

Various metals and other materials corrode when they are on or in the soil. The risk of corrosion for concrete is the susceptibility of concrete to corrosion when in contact with the soil. Risk of corrosion on concrete pertains to the potential soil-induced chemical reaction between a base (the concrete) and a weak acid (the soil solution). Special cements and methods of manufacturing may be used to reduce the rate of deterioration in soils that have a high risk of corrosion.

Soil Survey: Island of Hawaii, Hawaii

Survey Status: Out-of-date

Correlation Date: 01/01/1968

Distribution Date: 11/21/2001

Map Symbol	Soil Name	Rating
AaC	AINAKEA SILTY CLAY LOAM, 3 TO 12 PERCENT SLOPES	High
AaD	AINAKEA SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	High
AaE	AINAKEA SILTY CLAY LOAM, 20 TO 35 SLOPES	High
AFD	APAKUIE VERY FINE SANDY LOAM, 12 TO 20 PERCENT SLOPES	Low
AkC	AKAKA SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Moderate
AkD	AKAKA SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Moderate
AIC	ALAPAI SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Moderate
AID	ALAPAI SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Moderate
AIE	ALAPAI SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Moderate
ApD	ALAPAI EXTREMELY STONY SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Moderate
ASD	APAKUIE VERY STONY VERY FINE SANDY LOAM, 12 TO 20 PERCENT SLOPES	Low
BH	BEACHES	Moderate
FL	FILL LAND	Low
HaA	HAWI SILTY CLAY, 0 TO 3 PERCENT SLOPES	Low
HaC	HAWI SILTY CLAY, 3 TO 12 PERCENT SLOPES	Low
HCD	HANIPOE VERY STONY LOAM, 12 TO 20 PERCENT SLOPES	Low
HDD	HANIPOE SILT LOAM, 12 TO 20 PERCENT SLOPES	Moderate
HeC	HAWI EXTREMELY STONY SILTY CLAY, 6 TO 12 PERCENT SLOPES	Low
HFD	HANIPOE VERY ROCKY SILT LOAM, 6 TO 20 PERCENT SLOPES	Low
HHC	HEAKE VERY ROCKY SANDY LOAM, 6 TO 12 PERCENT SLOPES	Low
HKC	HEAKE EXTREMELY ROCKY SANDY LOAM, 0 TO 10 PERCENT SLOPES	Low
HIC	HILEA SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	High
HND	HONAUNAU SILT LOAM, 6 TO 20 PERCENT SLOPES	Moderate
HoC	HILO SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Moderate
HoD	HILO SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Moderate
HoE	HILO SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Moderate
HRD	HONAUNAU EXTREMELY ROCKY SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	Moderate
HsC	HONOKAA SILTY CLAY LOAM, LOW ELEVATION, 0 TO 10 PERCENT SLOPES	Moderate
HsD	HONOKAA SILTY CLAY LOAM, LOW ELEVATION, 10 TO 20 PERCENT SLOPES	Moderate
HsE	HONOKAA SILTY CLAY LOAM, LOW ELEVATION, 20 TO 35 PERCENT SLOPES	Moderate

Map Symbol	Soil Name	Rating
HTD	HONOKAA SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Moderate
HTE	HONOKAA SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Moderate
HUD	HONUAAULU VERY STONY SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	Moderate
HVD	HONUAAULU EXTREMELY STONY SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPE	Moderate
KaC	KAIWIKI SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Moderate
KaD	KAIWIKI SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Moderate
KaE	KAIWIKI SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Moderate
KBC	KAALUALU EXTREMELY STONY LOAMY SAND, 2 TO 12 PERCENT SLOPES	Low
KCD	KAHUA SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	High
KDD	KAINALIU VERY STONY SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Low
KEC	KAINALIU EXTREMELY STONY SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Low
KfA	KIKONI VERY FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES	Low
KGC	KAMAKOA VERY FINE SANDY LOAM, 0 TO 10 PERCENT SLOPES	Low
KhA	KOHALA SILTY CLAY, 0 TO 3 PERCENT SLOPES	Low
KhC	KOHALA SILTY CLAY, 3 TO 12 PERCENT SLOPES	Low
KhD	KOHALA SILTY CLAY, 12 TO 20 PERCENT SLOPES	Low
KhE	KOHALA SILTY CLAY, 20 TO 35 PERCENT SLOPES	Low
KIC	KAMAOA LOAM, 6 TO 12 PERCENT SLOPES	Low
KJC	KAMAOA LOAM, MODERATELY SHALLOW, 6 TO 12 PERCENT SLOPES	Low
KKC	KAMAOA EXTREMELY STONY LOAM, 6 TO 12 PERCENT SLOPES	Low
KLC	KAPAPALA LOAM, 0 TO 10 PERCENT SLOPES	Low
KLD	KAPAPALA LOAM, 10 TO 20 PERCENT SLOPES	Low
KMD	KAPAPALA VERY ROCKY LOAM, 6 TO 20 PERCENT SLOPES	Low
KNC	KAWAIIHAE EXTREMELY STONY VERY FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES	Low
KOC	KAWAIIHAE VERY ROCKY VERY FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES	Low
KPD	KEALAKEKUA SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Moderate
KRD	KEALAKEKUA VERY STONY SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	Moderate
KSD	KEALAKEKUA EXTREMELY STONY SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Moderate
KTB	KEEKEE LOAMY SAND, 0 TO 6 PERCENT SLOPES	Low
KuC	KUKAIAU SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Moderate
KuD	KUKAIAU SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Moderate
KuE	KUKAIAU SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Moderate
KVC	KEHENA SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	High
KwD	KUKAIAU SILTY CLAY LOAM, MODERATELY SHALLOW, 12 TO 20 PERCENT SLOPES	Low
KXC	KIKONI VERY FINE SANDY LOAM, 3 TO 12 PERCENT SLOPES	Low
KYC	KIKONI EXTREMELY STONY VERY FINE SANDY LOAM, 6 TO 12% SLOPES	Low
KZD	KILOHANA LOAMY FINE SAND, 12 TO 20 PERCENT SLOPES	Low
LAD	LAUMAIA SILT LOAM, 6 TO 20 PERCENT SLOPES	Moderate
LUC	LAUMAIA EXTREMELY STONY SILT LOAM, 6 TO 12 PERCENT SLOPES	Moderate

Map Symbol	Soil Name	Rating
MaA	MAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	Low
MHC	MAHUKONA SILTY CLAY LOAM, 3 TO 12 PERCENT SLOPES	Low
MKC	MAHUKONA VERY STONY SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Low
MLD	MAILE SILT LOAM, 6 TO 20 PERCENT SLOPES	Low
MMD	MANAHAA SILT LOAM, 6 TO 20 PERCENT SLOPES	Low
MND	MANAHAA EXTREMELY STONY SILT LOAM, 6 TO 20 PERCENT SLOPES	Low
MoC	MOAULA SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Low
MoD	MOAULA SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Low
MoE	MOAULA SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Low
MT	MIXED ALLUVIAL LAND	Low
NaC	NAALEHU SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Low
NaD	NAALEHU SILTY CLAY LOAM, 10 TO 20 PERCENT SLOPES	Low
NaE	NAALEHU SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Low
NhD	NAALEHU VERY ROCKY SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	Low
NIC	NIULII SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Moderate
NID	NIULII SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Moderate
NIE	NIULII SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Moderate
OaC	OLAA SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Low
OHC	OHIA SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Moderate
OID	OLAA EXTREMELY STONY SILTY CLAY LOAM, 0 TO 20 PERCENT SLOPES	Low
OoC	OOKALA SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Moderate
OoD	OOKALA SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Moderate
OoE	OOKALA SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Moderate
OSD	OHIA EXTREMELY STONY SILTY CLAY LOAM, 0 TO 20 PERCENT SLOPES	Moderate
PaC	PAAUHAU SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Moderate
PaD	PAAUHAU SILTY CLAY LOAM, 12 TO 20 PERCENT SLOPES	Moderate
PaE	PAAUHAU SILTY CLAY LOAM, 20 TO 35 PERCENT SLOPES	Moderate
PeC	PANAEWA VERY ROCKY SILTY CLAY LOAM, 0 TO 10 PERCENT SLOPES	Moderate
PKB	PAKINI VERY FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES	Low
PLC	PALAPALAI SILT LOAM, 6 TO 12 PERCENT SLOPES	Low
PMC	PALAPALAI SILTY CLAY LOAM, 6 TO 12 PERCENT SLOPES	Low
PND	PIIHONUA SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	High
POD	PIIHONUA EXTREMELY STONY SILTY CLAY LOAM, 6 TO 20 PERCENT SLOPES	High
PPC	PUAULU SILT LOAM, 0 TO 10 PERCENT SLOPES	Moderate
PRD	PUNOHU SILT LOAM, 12 TO 20 PERCENT SLOPES	Moderate
PSC	PUUKALA EXTREMELY STONY SILT LOAM, 6 TO 12 PERCENT SLOPES	Moderate
PTC	PUUKALA VERY ROCKY SILT LOAM, 6 TO 12 PERCENT SLOPES	Moderate
PUC	PUU OO SILT LOAM, 6 TO 12 PERCENT SLOPES	High
PVD	PUU PA EXTREMELY STONY VERY FINE SANDY LOAM, 6 TO 20 PERCENT SLOPES	Moderate
PVF3	PUU PA EXTREMELY STONY VERY FINE SANDY LOAM, 70 TO 100 PERCENT SLOPES, SEVERELY ERODED	Moderate
PWD	PUU PA SILT LOAM, 12 TO 20 PERCENT SLOPES	Low

Map Symbol	Soil Name	Rating
rAK	AKAKA SOILS	Moderate
rAM	AMALU SOILS	High
rAR	AMALU-ROUGH BROKEN LAND ASSOCIATION	High
RB	ROUGH BROKEN LAND	High
rCL	CINDER LAND	Low
rHID	HUIKAU LOAMY SAND, 12 TO 20 PERCENT SLOPES	Low
rHID2	HUIKAU LOAMY SAND, 12 TO 20 PERCENT SLOPES, ERODED	Low
rHLD	HUIKAU EXTREMELY STONY LOAMY SAND, 12 TO 20 PERCENT SLOPES	Low
rHP	HYDRANDEPT-TROPOFOLIST ASSOCIATION	High
rKAD	KAHALUU EXTREMELY ROCKY MUCK, 6 TO 20 PERCENT SLOPES	High
rKED	KAIMU EXTREMELY STONY PEAT, 7 TO 25 PERCENT SLOPES	Low
rKFD	KEAUKAHA EXTREMELY ROCKY MUCK, 6 TO 20 PERCENT SLOPES	Moderate
rKGD	KEEI EXTREMELY ROCKY MUCK, 6 TO 20 PERCENT SLOPES	Moderate
rKHD	KEKAKE EXTREMELY ROCKY MUCK, 6 TO 20 PERCENT SLOPES	Moderate
rKUC	KILAUEA EXTREMELY GRAVELLY SAND, 6 TO 12 PERCENT SLOPES	Low
rKXD	KILOA EXTREMELY STONY MUCK, 6 TO 20 PERCENT SLOPES	Moderate
rKYD	KONA EXTREMELY ROCKY MUCK, 6 TO 20 PERCENT SLOPES	Low
rLLD	LALAAU EXTREMELY STONY MUCK, 6 TO 20 PERCENT SLOPES	High
rLV	LAVA FLOWS, AA	Low
rMAD	MALAMA EXTREMELY STONY MUCK, 3 TO 15 PERCENT SLOPES	Moderate
rMUB	MANU SILT LOAM, 2 TO 6 PERCENT SLOPES	Low
rMWD	MAWAE EXTREMELY STONY MUCK, 6 TO 20 PERCENT SLOPES	Moderate
rOPE	OPIHIKAO EXTREMELY ROCKY MUCK, 3 TO 25 PERCENT SLOPES	Moderate
rPAE	PAPAI EXTREMELY STONY MUCK, 3 TO 25 PERCENT SLOPES	Low
rPHB	PUHIMAU SILT LOAM, 2 TO 6 PERCENT SLOPES	Moderate
rPXE	PUNA EXTREMELY STONY MUCK, 3 TO 25 PERCENT SLOPES	Low
rPYD	PUNALUU EXTREMELY ROCKY PEAT, 6 TO 20 PERCENT SLOPES	Low
rRO	ROCK LAND	Low
rVS	VERY STONY LAND	Moderate
Tr	TROPAQUEPTS	High
UMD	UMIKOA SILT LOAM, 12 TO 20 PERCENT SLOPES	Low
USD	UMIKOA EXTREMELY STONY SILT LOAM, 12 TO 20 PERCENT SLOPES	Low
WAC	WAIHAHA SILT LOAM, 0 TO 10 PERCENT SLOPES	Low
WAD	WAIHAHA SILT LOAM, 10 TO 20 PERCENT SLOPES	Low
WHC	WAIHAHA EXTREMELY STONY SILT LOAM, 6 TO 12 PERCENT SLOPES	Low
WKD	WAIHAHA VERY ROCKY SILT LOAM, 10 TO 20 PERCENT SLOPES	Low
WLC	WAIKALOA VERY FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES	Low
WMC	WAIMEA VERY FINE SANDY LOAM, 6 TO 12 PERCENT SLOPES	Low
WSD	WAIMEA EXTREMELY STONY VERY FINE SANDY LOAM, 12 TO 20 PERCENT SLOPES	Low